REMARKS

In the Office Action, claims 1-6, 9-13, 15-19, 22-26, 29-33 and 35-39 were rejected and claims 7, 8, 14, 20-21, 27-28, 34 and 40-42 were objected to. Reconsideration and allowance of all pending claims are requested.

Rejections Under 35 U.S.C. § 112

The Office Action summarizes claim 2 as rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner pointed out that there was insufficient antecedent basis for the limitation "data" in line 3 of claim 2. Applicants submit that the antecedent basis for this limitation in line 3 comes from line 2 of the claim. Therefore, Applicants respectfully request the Examiner to reconsider and remove the rejection.

Rejections Under 35 U.S.C. § 102

The Office Action summarizes claims 1, 10, 24 and 36-37 as rejected under 35 U.S.C. §102(e) as being anticipated by Khurana et al. (U.S. Patent No. 6,735,489; hereinafter "Khurana"). Rejected claims 1, 24 and 36 are independent and will be discussed in detail below.

Khurana does not teach generating a parametric master model for a part from an *editable geometry*.

Claim 1 recites a method of re-engineering a part. The method includes generating a parametric master model for the part ***from an editable geometry for the part***. The method also includes generating a manufacturing context model from a design master model, the design master model comprising the parametric master model and the manufacturing context model comprising a plurality of tooling features. Further, the method includes creating a tooling master model from the manufacturing context model, the tooling master model comprising a tooling geometry for the part.

Claim 24 recites a system for re-engineering a part. The system includes a part design master model module configured to generate a parametric master model for the part ***from an editable geometry for the part*** and a tooling master model module configured to receive the parametric master model, to generate a manufacturing context model from the parametric master model, and to create a tooling master model from the manufacturing context model. Further, the manufacturing context model comprises a plurality of tooling features and the tooling master model comprises a tooling geometry.

Claim 36 recites a method of manufacturing. The method includes generating a parametric master model for a part ***from an editable geometry for the part*** and generating a manufacturing context model from the parametric master model, the manufacturing context model comprising a plurality of tooling features. The method also includes creating a tooling master model from the manufacturing context model, the tooling master model comprising a tooling geometry for the part and generating a hard tooling using the tooling master model. The method further includes manufacturing at least one part using the hard tooling and a plurality of process parameters.

Applicants submit that the invention uses an ***editable geometry*** to generate the parametric model for a part as recited in the specification. *See* Application, paragraphs 20-21, and FIG. 3. By way of explanation and background, as set forth in the Application, the parametric master model is generated from the editable geometry in a computer aided design (CAD) system. An exemplary editable geometry is an editable non-parametric CAD model generated using the CAD system. By "editable" it is meant that the geometry can be altered in its native form, for example using the CAD software. For example, the editable geometry may be generated from data characterizing the part. Alternatively, the editable geometry may be obtained from legacy design information. *See id.*, paragraph 26. Data acquisition is typically performed by measuring the part, or by using an existing data set characterizing the part.

Further, generation of parametric master model includes identifying and extracting a number of critical parameters from the ***editable geometry***. Exemplary critical parameters include dimensions and curvatures of part, and are identified, for example, by a user. *See id.*, paragraph 33, and FIG. 3. For example, when the technique is employed to reverse engineer a part, the extraction of parameters includes determining the existing values of these parameters. Alternatively, when the technique is employed to reengineer, part extraction includes both determining the existing values of critical parameters and applying engineering knowledge to improve the existing values obtained from the editable geometry.

The Examiner argued that Khurana discloses generation of a parametric master model from an editable geometry. The Examiner cited passages at col. 2, lines 23-42 in support of the rejection. The cited passages from Khurana, and indeed the reference as a whole, do not support the Examiner's position, however. Khurana does not, in these passages or when considered as a whole, fairly suggest generating the parametric model from an ***editable geometry***. As can be seen from the cited passages, Khurana teaches the parametric modeling capabilities that refer to the ability to place mathematical constraints or parameters on features of the model so that the features may be edited and changed later. However, Khurana does not teach the parametric model being generated from an editable geometry.

Absent any teaching regarding these recitations of claims 1, 24 and 36 regarding generation of parametric model from an ***editable geometry***, Khurana simply cannot anticipate these claims. Therefore, Applicants submit that independent claims 1, 24 and 36 are allowable and respectfully request the Examiner to reconsider rejection of the claims.

Rejections Under 35 U.S.C. § 103

Claims 2-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khurana, in view of Liasi (U.S. Patent Publication No. 2002/0090130). Further, claims 11-13, 15-19, 22-23, 25-26, 29-33, 35 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khurana, in view of Sebastian et al. (U.S. Patent No. 5,822,206).

With regard to dependent claims 2-6, 9, 11-13, 15-19, 22-23, 25-26, 29-33, 35 and 38-39, these claims depend directly or indirectly from allowable claims 1, 24 and 36, and are therefore considered to be allowable at least by virtue of their dependency from an allowable base claim.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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